

**510(k) Summary**  
**Evolve® HPD 980/ 1470nm Multiwavelength Diode Laser**

**Submitter's Name, Address, Telephone Number, Contact Person  
and Date Prepared**

Biolitec Medical Devices, Inc.  
515 Shaker Road  
East Longmeadow, Massachusetts 01028  
Phone: (413) 525-0600  
Facsimile: (413) 525-0611

K120231  
1 of 2

Contact Person: Harry Hayes, Ph.D. – Regulatory Consultant  
Date prepared: January 23, 2012

**Name of Device and Name/Address of Sponsor**

Evolve® HPD 980/ 1470nm Multiwavelength Diode Laser, (Evolve Dual)  
Biolitec Medical Devices, Inc.  
515 Shaker Road  
East Longmeadow, Massachusetts 01028

**Classification Name**

Surgical laser, GEX

**Predicate Devices**

Evolve HPD 980/ 1470nm Multiwavelength Diode Laser, (K112013)

**Intended Use/Indication for Use**

The Evolve HPD 980/ 1470nm Multiwavelength Diode Laser (Evolve Dual) (and its delivery accessories used to deliver optical energy) are indicated for use in general surgical applications for incision, excision, ablation, cutting, vaporization, hemostasis, and coagulation of soft tissue contact or non-contact, open or closed endoscopic applications where incision, tissue dissection, excision of external tumors and lesions, complete or partial resection of internal organs, tumors and lesions, tissue vaporization, hemostasis and/or coagulation may be indicated.

**Technological Characteristics**

The Biolitec Medical Device, Inc. Evolve HPD 980/ 1470nm Multiwavelength Diode Laser contains the same identical components as the cleared Biolitec, Inc. Evolve HPD 980/ 1470nm Multiwavelength Diode Laser (K112013).

**Performance Data**

The device complies with the following voluntary consensus standards: 21 C.F.R. §§ 1040.10 & 1040.11; ANSI/AAMI ES1; IEC 60601-1; IEC 60601-2-22; EN 60825-1, and ANSI/AAMI/ISO 10993-7.

**Substantial Equivalence**

The Evolve HPD 980/ 1470nm Multiwavelength Diode Laser is as safe and effective for these Indication for Use as the cleared predicate device.

The Evolve HPD 980/ 1470nm Multiwavelength Diode Laser has the identical same intended uses, indications, technological characteristics, and principles of operation as its predicate device. Thus, the Evolve HPD 980/ 1470nm Multiwavelength Diode Laser is substantially equivalent to its predicate device.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room – WO66-G609  
Silver Spring, MD 20993-0002

APR 24 2012

Biolitec Medical Devices, Inc.  
% Harry Hayes, Ph.D.  
Regulatory Consultant  
515 Shaker Road  
East Longmeadow, Massachusetts 01028

Re: K120231

Trade/Device Name: Evolve® HPD 980/1470nm Multiwavelength Diode Laser  
Regulation Number: 21 CFR 878.4810  
Regulation Name: Laser surgical instrument for use in general and plastic surgery and in dermatology  
Regulatory Class: II  
Product Code: GEX  
Dated: January 23, 2011  
Received: January 25, 2011

Dear Dr. Hayes:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act

or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



for Mark N. Melkerson  
Director  
Division of Surgical, Orthopedic  
and Restorative Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

Indications for Use Statement

510(k) Number (if known): K120231

Device Name: **Evolve® HPD 980/ 1470nm Multiwavelength Diode Laser**

Indications for Use:

The device is intended for delivery of laser light to soft tissue in the contact and non contact mode during surgical procedures including via endoscopes. The Evolve HPD Multiwavelength 980/ 1470 Diode Laser is generally indicated for use in incision, excision, vaporization, ablation, hemostasis or coagulation of soft tissue in ear, nose and throat and oral surgery (otolaryngology), arthroscopy, gastroenterology, general surgery, dermatology, plastic surgery, podiatry, urology, gynecology, neurosurgery (peripheral nervous system), pulmonary surgery, cardiothoracic surgery, dental applications, and endovenous occlusion of the saphenous veins in patients with superficial vein reflux. The Multiwavelength laser is further indicated for laser assisted lipolysis.

The device is specifically indicated for use as follows:

**Ear, Nose and Throat and Oral Surgery (Otolaryngology)**

Hemostasis, incision, excision, ablation, coagulation, and vaporization of tissue from the ear, nose, throat and adjacent areas including soft tissue in the oral cavity.

Examples include:

Removal of benign lesions from the ear, nose and throat

Excision and vaporization of vocal cord nodules and polyps

Incision and excision of carcinoma in situ

Ablation and vaporization of hyperkeratosis

Excision of carcinoma of the larynx

Laryngeal papillomectomy

Excision and vaporization of herpes simplex I and II

Neck dissection

**Arthroscopy**

Hemostasis, incision, excision, coagulation, vaporization and ablation of joint tissues during arthroscopic surgery. Examples include:

Meniscectomy

Synovectomy

Chondromalacia

*Mark R. Ogden for MRM*  
(Division Sign-Off)  
Division of Surgical, Orthopedic,  
and Restorative Devices

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### **Gastroenterology**

Hemostasis, incision, excision, ablation, coagulation and vaporization of tissue in the upper and lower gastrointestinal tracts and also with endoscopic procedures.

Examples include:

Hemostasis of upper and lower GI bleeding

Excision and vaporization of colorectal carcinoma

Excision of polyps

### **General Surgery, Dermatology, Plastic Surgery and Podiatry**

Excision, ablation, vaporization and photocoagulation of skin lesions, hemostasis, incision, excision, vaporization, ablation and debulking of soft tissue, abdominal, rectal, skin, fat or muscle tissue and dermabrasion.

Examples include:

Matrixectomy

Excision of neuromas

Excision of periungual and subungual warts

Excision of plantar warts

Excision of keloids

Liver resection

Excision of cutaneous lesions

Hemorrhoidectomy

Appendectomy

Debridement of decubitus ulcers

Hepatobiliary tumors

Mastectomy

Dermabrasion

Laser Assisted Lipolysis

Vaporization and hemostasis of capillary hemangioma

Excision, vaporization and hemostasis of abdominal tumors

Excision, vaporization and hemostasis of rectal pathology

Pilonidal cystectomy

Hernioraphy

Adhesiolysis

Parathyroidectomy

Laparoscopic cholecystectomy

Thyroidectomy

Resection of organs

Debridement of wounds

Photocoagulation of teleangectasia of the legs and face

Photocoagulation of vascular lesions of the face and extremities

Endovenous Occlusion of the Saphenous Veins in Patients with Superficial Vein

Reflux Associated with Varicose Veins and Varicosities

Treatment of reticular veins and branch varicosities

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510(k) Number K12 0231

### **Urology**

Excision, vaporization, incision, coagulation, ablation and hemostasis of urological tissues.

Examples include:

Vaporization of urethral tumors

Release of urethral stricture

Removal of bladder neck obstruction

Excision and vaporization of condyloma

Lesions of external genitalia

Vaporization of the prostate to treat benign prostatic hyperplasia (BPH). Note: powers from 151W to 200W should only be applied in the vaporization of the prostate to treat Benign Prostatic Hyperplasia (BPH).

### **Gynecology**

Ablation, excision, incision, coagulation, hemostasis and vaporization of gynecological tissue.

Examples include:

Endometrial ablation

Excision or vaporization of condylomata acuminata

Vaporization of cervical intraepithelial neoplasia

Cervical conization

Menorrhagia

### **Neurosurgery**

Vaporization, coagulation, excision, incision, ablation and hemostasis of soft tissue.

Examples include:

hemostasis in conjunction with meningiomas

### **Cardiac Surgery**

Hemostasis and coagulation of soft tissue, including cardiac tissue.

### **Pulmonary Surgery**

Hemostasis, vaporization, coagulation, incision, excision and ablation of soft tissue in the pulmonary system.

Examples include:

Tracheobronchial malignancy or stricture

Benign and malignant pulmonary obstruction

Endoscopic pulmonary applications

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### **Dental Applications**

Indicated for the following applications on intraoral and extraoral soft tissue (including marginal and interdental gingival and epithelial lining of free gingival):

frenectomy, frenotomy, biopsy, operculectomy, implant recovery, gingivectomy, gingivoplasty, gingival troughing, crown lengthening, hemostasis of donor site, removal of granulation tissue, laser assisted flap surgery,

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debridement of diseased epithelial lining, incisions and draining of abscesses, tissue retraction for impressions, papillectomy, vestibuloplasty, excision of lesions, exposure of unerupted/ partially erupted teeth, leukoplakia, removal of hyperplastic tissues, treatment of aphthous ulcers and sulcular debridement (removal of diseased or inflamed soft tissue in the periodontal pocket), pulpotomy, pulpotomy as an adjunct to root canal therapy and light activation of bleaching materials for teeth whitening.

**Powers from 151W to 200W**

Powers from 151W to 200W should only be applied in the vaporization of the prostate to treat Benign Prostatic Hyperplasia (BPH).

(PLEASE DO NOT WRITE BELOW THIS LINE -- CONTINUE ON ANOTHER  
PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use ✓  
(Per 21 C.F.R. 801.109)

OR

Over-The-Counter Use \_\_\_\_\_  
(Optional Format 1-2-96)

Neil R. Ogden for name  
(Division Sign-Off)  
Division of Surgical, Orthopedic,  
and Restorative Devices

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